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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/670,630

09/27/2000

Jer-Chen Kuo

ALLO 4180

6172

7590

02/08/2005

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EXAMINER

PHAN, HANH

ART UNIT

PAPER NUMBER

2633

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/670,630

Applicant(s)

KUO ET AL.

Examiner

Hanh Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 04/15/2004.
2. The indicated allowability of claims 13 and 15-20 is withdrawn in view of the newly discovered reference(s) to Proctor (US Patent No. 5,872,645), Ohshima (US Patent No. 5,483,368) and Panahi et al (US Patent No. 6,272,130). Rejections based on the newly cited reference(s) follow.
3. In claim 7, line 2, the phrase "optical transmission line is fiver optic line" should be changed to – optical transmission line is fiber optic line --.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 11 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "the improvement" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3, 7-13 and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Proctor (US Patent No. 5,872,645) in view of Ohshima (US Patent No. 5,483,368).

Regarding claims 1, 8-11, 13 and 15-18 referring to Figures 1C and 1A, Proctor discloses an optical communication network (Fig. 1C) comprising :

an optical transmission line (Fig. 1C);

an optical line terminal (i.e., headend, Fig. 1C) connected to the optical transmission line;

a first plurality of optical network units (i.e., group E , Fig. 1C) connected to the optical line terminal and configured for optically transmitting TDMA signals of a first wavelength to the optical line terminal through the optical transmission line (as indicated in Fig. 1C, each group has a frequency band and see col. 1, lines 25-34 and col. 2, lines 10-25); and

at least a second plurality of optical network units (i.e., group F , Fig. 1C) connected to the optical line terminal and configured for optically transmitting TDMA signals of a second wavelength different than the first wavelength to the optical line

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terminal through the optical transmission line (as indicated in Fig. 1C, each group has a frequency band and see col. 1, lines 25-36 and col. 2, lines 10-25).

Proctor differs from claims 1, 8-11, 13 and 15-18 in that he does not specifically teach wherein a first plurality of optical network units each optical network unit transmitting a first wavelength and a second plurality of optical network units each transmitting a second wavelength different than the first wavelength. However, Ohshima in US Patent No. 5,483,368 teaches a first plurality of optical network units each optical network unit transmitting a first wavelength and a second plurality of optical network units each transmitting a second wavelength different than the first wavelength (Fig. 12, col. 10, lines 33-66). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the first plurality of optical network units each optical network unit transmitting a first wavelength and the second plurality of optical network units each transmitting a second wavelength different than the first wavelength as taught by Ohshima in the system of Proctor. One of ordinary skill in the art would have been motivated to do this since Ohshima suggests in column 10, lines 33-66 that using such the first plurality of optical network units each optical network unit transmitting a first wavelength and a second plurality of optical network units each transmitting a second wavelength different than the first wavelength have advantage of allowing reducing the interference between the signals and providing the optical communication system with high speed and high capacity.

Regarding claim 2, the combination of Proctor and Ohshima teaches the optical line terminal includes a first optical receiver for receiving the TDMA signals of the first

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wavelength, and a second optical receiver for receiving the TDMA signals of the second wavelength (Fig. 12 of Ohshima, col. 10, lines 33-66).

Regarding claim 3, the combination of Proctor and Ohshima teaches the optical line terminal includes at least one wavelength division multiplexer (105, 152)(Fig. 12 of Ohshima) connected to the optical transmission line for routing the TDMA signals of the first wavelength to the first optical receiver and the TDMA signals of the second wavelength to the second optical receiver.

Regarding claim 7, Proctor further teaches the optical transmission line is fiber optic line (Fig. 1C).

Regarding claim 12, Proctor further teaches the network has an architecture selected from the group consisting of ring, tree and bus architectures (Fig. 1C).

Regarding claims 19 and 20, the combination of Proctor and Ohshima teaches the optical transmitters are laser diodes (col. 7 of Proctor, lines 24-30).

8. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Proctor (US Patent No. 5,872,645) in view of Ohshima (US Patent No. 5,483,368) and further in view of Panahi et al (US Patent No. 6,272,130)

Regarding claim 4, Proctor as modified by Ohshima differs from claim 4 in that it does not disclose first and second recovery circuits connected to the first and second optical receivers, respectively. However, Panahi in US Patent No. 6,272,130 teaches disclose first and second recovery circuits connected to the first and second optical receivers, respectively (see Fig. 8A). Therefore, it would have been obvious to one

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having skill in the art at the time the invention was made to incorporate the first and second recovery circuits connected to the first and second optical receivers, respectively as taught by Yavor in the system of Proctor modified by Ohshima in order to re-shape, and re-time the signal and increasing the signal to noise ratio.

Regarding claim 5, the combination of Proctor, Ohshima and Panahi teaches a multiplexer (i.e., buffers in the Fig. 8A of Panahi) connected to outputs of the first and second recovery circuits for multiplexing output data to a common data receiving point.

Regarding claim 6, the combination of Proctor, Ohshima and Panahi teaches the multiplexer includes buffers for selectively buffering said output data (Fig. 8A of Panahi).

Response to Arguments

9. Applicant's arguments with respect to claims 1-13 and 15-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

A handwritten signature in cursive script, appearing to read 'Hanh Phan', written in black ink.

**HANH PHAN
PRIMARY EXAMINER**